these four families the author recognizes 15 genera and about 140 species. New species are published in *Garrya* and in *Alangium;* and several recently described species of *Cornus* have been incorporated and redescribed. The work is comprehensive, conservative in generic and specific limitations, copiously illustrated, and provided with excellent keys; it should serve as a valuable and authentic guide in the taxonomic study of plants belonging to these natural groups.

Part 42 embraces an exhaustive taxonomic treatment of the Euphorbiaceae-Jatropheae by Professor F. PAX. The tribe comprises 12 genera, and to these are referred 196 species, of which 43, or approximately one-fourth, are new to science. One new genus is included, namely *Neojatropha* of eastern tropical Africa, where it is at present represented by two known species. A second new genus (*Ritchieophyton*) is suggested and included in the key to the genera of the tribe, but publication of it is withheld for a subsequent fascicle dealing with this family. The group is treated in a masterly way, and numerous carefully executed original illustrations amplify the lucid text. Of considerable interest is the brief section dealing with geographical distribution. Seven of the twelve genera are exclusively American, while five (including *Ritchieophyton*) are paleotropic; and *Jatropha*, the largest of all the genera, extends throughout the equatorial belt. The two great centers of distribution of these plants in America are (1) in the region from Central America southward to Brazil and Paraguay, and (2) independently, in the West Indies.—J. M. GREENMAN.

A new flora of Congo.[8]—The present volume records all flowering plants of the Congo known up to the end of 1908, and includes a limited bibliography, citation of exsiccatae, and the vernacular names in many instances. The flora embraces a total of 3546 recognized species, of which 2826 belong to the dicotyledons, 717 to the monocotyledons, and 3 to the gymnosperms. The last group is represented by *Gnetum africanum* and two species of *Encephalartos*. The main elements of the flora, as represented by leading families, are as follows: Leguminosae (415 species), Rubiaceae (299), Orchidaceae (152), Compositae (148), Euphorbiaceae (144), Cyperaceae (139), and Gramineae (132). A very interesting tabulation is given showing the growth of our knowledge of the flora from 1896 to 1908. The work is well indexed, but is entirely without keys to genera or species. Brief keys leading to the species, particularly in the case of the larger genera, would have added considerably to the usefulness of the book.—J. M. GREENMAN.

Paleobotanical literature.—JONGMANS[9] has begun the publication of a very useful and a most laborious series, presenting a complete and well-organized

[8] DURAND, THÉOPH. ET HÉL., Sylloge Florae Congolanae. Bull. Jard. Bot. Brux. **2**:1–716. Bruxelles: Maison d'édition A. Castaigne. Albert de Boeck, Successeur. 1910.

[9] JONGMANS, W. J., Die palaeobotanische Literatur. Vol. I. pp. iv+217. Jena: Gustav Fischer. 1910. *M* 7.

bibliography of paleobotany. The first volume contains the titles of 1908, and is divided into two sections: (1) an author list (pp. 17), which includes 309 entries; and (2) a subject list (pp. 200), by which one may find at once any plant referred to. The number of titles is increased by the fact that the list includes many papers on living forms which are related in some way to the interpretation of paleobotanical material. In these days, when paleobotany is becoming such a necessary part of morphology, such a volume has become indispensable.—J. M. C.

A revision of the genus Eucalyptus.—The title-page and index received recently completes the first volume of *A critical revision of the genus Eucalyptus* by J. H. MAIDEN.[10] In this volume the author treats 40 species, giving detailed descriptions, synonomy, distribution, and much supplementary information; these species and their known varieties and forms are illustrated by 48 admirable plates. The work is an exhaustive and authoritative treatment of this highly interesting and economically important group of plants, and it is a pleasure to note that it is being continued; the first part of the second volume, containing nine species and four plates, has already been issued.—J. M. GREENMAN.

Illinois State Academy of Science.—The third volume (1910) of Transactions contains the following botanical papers: The vegetational history of a blow-out (abstract), by H. A. GLEASON; Preliminary account of the forest successions on Isle Royale, Lake Superior (abstract), by W. S. COOPER; The forest associations of northwestern Illinois, by H. S. PEPOON.—J. M. C.

NOTES FOR STUDENTS

Plant diseases.—BANCROFT[11] has studied the life history of *Cladosporium herbarum* and finds that this fungus, known to be common on dead leaves, is connected with a parasitic stage which from its fructification would be classed in the form genus *Hormodendron*. The *Hormodendron* form makes holes in the leaves of many plants, among which are cucumber, melon, and cabbage. It is mentioned as epidemic in cucumber leaves. The holes are said not to be formed by the drying and falling out of areas of tissues, as in leaf-spot diseases. In this case the perforations occur from the first and increase in size, often running together so as to form large irregular holes. The margins are surrounded by a narrow line of dead brownish tissue. From the tissues surrounding the holes conidiophores of *Hormodendron* appear and produce branched chains of conidia. In cultures from these chains, conidia of *Hormodendron* were at first produced, but as the cultures became older only those of *Cladosporium* were formed.

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[10] MAIDEN, J. H., A critical revision of the genus *Eucalyptus*. 4to. pp. 349. *pls. 48*. Sydney: William Applegate Gullick. 1903–1909.

[11] BANCROFT, C. K., Researches on the life history of parasitic fungi. I. *Cladosporium herbarum* Link. Annals of Botany **24**:359–372. *pl. 1*. 1910.